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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/941,732	08/30/2001	Kentaro Hara	056203-0105	6485
22428	7590	06/17/2005	EXAMINER	
FOLEY AND LARDNER SUITE 500 3000 K STREET NW WASHINGTON, DC 20007			GENACK, MATTHEW W	
			ART UNIT	PAPER NUMBER
			2645	

DATE MAILED: 06/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/941,732	HARA, KENTARO	
	<b>Examiner</b>	<b>Art Unit</b>	
	Matthew W. Genack	2645	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 August 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. ____   |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>30 August 2001</u> .  | 6) <input checked="" type="checkbox"/> Other: <u>Supplemental IDS</u> .     |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: "S25" of Fig. 6. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

2. The disclosure is objected to because of the following informalities: "see Fig. 13" in [0056] Line 21 and [0067] Line 4, in spite of the fact that Fig. 13 does not exist. Furthermore, "mode to mode 5" in [0076] Line 10 is an incomplete statement. Furthermore, "sloop" ([0080] Line 5) is not a recognized word. Furthermore, Examiner does not recognize the term "sleeve mode" ([0083] Line 3). Furthermore, the sentence "The fact that the portable device 10 is located in the cabin is certainly grasped by the control circuit 21a of the stationary device

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20 by the process of determining whether the motor vehicle 1 is within or outside the vehicle (steps S9a and S9b, and S17 to S18)." does not make sense.

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Bachhuber *et. al.*, U.S. Patent No. 6,087,987.

Regarding Claim 1, Bachhuber *et. al.* discloses a radio system that allows the electronic key for a motor vehicle to be located (Abstract, Column 1 Line 66 to Column 2 Line 2). The electronic key is portable (Column 4 Lines 6-15, Figs. 1-2). The motor vehicle contains a set of transmitter/receivers that are coupled to a controller and that are stationary with respect to said motor vehicle and that engage in wireless communication with the electronic key (Column 3 Line 61 to Column 4 Line 1, Column 4 Lines 21- 24, Fig. 1). A transmitter/receiver transmits a search signal that is received by the electronic key, and that causes said electronic key to transmit an identification signal back to the transmitter/receiver, said identification signal's amplitude being measured at the initiating transmitter/receiver as well as various other transmitter/receivers inside of the vehicle (Column 4 Lines 46-59); additionally, the electronic key can measure the

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received power level of a signal (such as the search signal) sent from the transmitter/receiver (Column 5 Lines 15-20), and transmit this information back to the transmitter/receiver (Column 5 Lines 31-34). The motor vehicle contains four antennae, coupled to respective transmitter/receivers, located in corners (Column 3 Lines 56-57, Column 6 Lines 20-23, Fig. 3). Based on the signals transmitted by the electronic key, the controller determines the position of the electronic key (Column 4 Lines 59-62).

Regarding Claim 2, Bachhuber *et. al.* discloses a radio system that allows the electronic key for a motor vehicle to be located (Abstract, Column 1 Line 66 to Column 2 Line 2). The electronic key is portable (Column 4 Lines 6-15, Figs. 1-2). The motor vehicle contains a set of transmitter/receivers that are coupled to a controller and that are stationary with respect to said motor vehicle and that engage in wireless communication with the electronic key (Column 3 Line 61 to Column 4 Line 1, Column 4 Lines 21- 24, Fig. 1). The motor vehicle contains four antennae, coupled to respective transmitter/receivers, located in corners (Column 3 Lines 56-57, Column 6 Lines 20-23, Fig. 3). The transmitter/receivers transmit search signals that are received by the electronic key, and that causes said electronic key to transmit an identification signal back to the transmitter/receiver (Column 4 Lines 46-59); additionally, the electronic key can measure the received power levels of signals (such as search signals) sent from the transmitter/receivers and convert these measurements into location information (Column 5 Lines 15-20), and transmit this information back to the transmitter/receivers and thereby the controller (Column 5 Lines 31-34).

Regarding Claim 3, Bachhuber *et. al.* discloses a radio system that allows the electronic key for a motor vehicle to be located (Abstract, Column 1 Line 66 to Column 2 Line 2). The electronic key is portable (Column 4 Lines 6-15, Figs. 1-2). The motor vehicle contains a set of transmitter/receivers that are coupled to a controller and that are stationary with respect to said motor vehicle and that engage in wireless communication with the electronic key (Column 3 Line 61 to Column 4 Line 1, Column 4 Lines 21- 24, Fig. 1). The motor vehicle contains four antennae, coupled to respective transmitter/receivers, located in corners (Column 3 Lines 56-57, Column 6 Lines 20-23, Fig. 3). The electronic key transmits an identification signal to the transmitter/receiver, said identification signal's amplitude being measured at the various transmitter/receivers inside of the vehicle (Column 4 Lines 46-59). Based on the signals transmitted by the electronic key, the controller determines the position of the electronic key (Column 4 Lines 59-62).

Regarding Claim 6, Bachhuber *et. al.* discloses that the antennas have predetermined directional characteristics that are used by the controller in the computation of the location of the electronic key relative to these antennas (and thus, relative to the baseline vectors determined by the positions of the antennae pairs) (Column 6 Lines 13-18).

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to

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be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bachhuber *et. al.* in view of Stippler, U.S. Patent No. 6,218,932.

Bachhuber *et. al.* discloses every limitation of Claims 1 and 3, upon which Claims 4-5 depend, respectively, as outlined above.

Bachhuber *et. al.* does not expressly disclose the adjustment of the stationary device's antennae output powers and the taking of measurements for each adjustment.

Stippler discloses a motor device antitheft device whereby challenge signals are transmitted to a portable code transmitter and response signals are transmitted from said portable code transmitter (Abstract, Column 3 Lines 9-37, Fig. 1). The transmission power level is varied and the portable code transponder measures the received power level for each case (Column 5 Lines 1-27, Fig. 3).

At the time that the invention was made, it would have been obvious to one of ordinary skill in the art to modify the invention of Bachhuber *et. al.* by varying the intensity of the transmitted power from the stationary device and the electronic key, and measuring the received power level for each case.

One of ordinary skill in the art would have been motivated to make this modification because of the enhanced accuracy of determining position based on several transmitting powers since effects such as receiver saturation, near field

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coupling, and reflections can cause perturbations in position determination measurements.

7. Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bachhuber *et. al.* in view of Memmola, U.S. Patent No. 4,733,215.

Regarding Claim 7, Bachhuber *et. al.* discloses every limitation of Claim 1, upon which Claim 7 depends, as outlined above. Furthermore, Bachhuber *et. al.* discloses that the stationary device is located inside of a motor vehicle (Column 3 Line 61 to Column 4 Line 1, Column 4 Lines 21- 24, Fig. 1).

Bachhuber *et. al.* does not expressly disclose the determination that the electronic key is inside or outside of the motor vehicle.

Memmola discloses an antitheft protection device that uses wireless technology that includes a portable transmitter (Abstract, Column 1 Line 49 to Column 2 Line 2, Column 4 Lines 42-55, Fig. 1). It can be determined if an individual is inside of a motor vehicle (Column 9 Lines 22-30).

At the time that the invention was made, it would have been obvious to one of ordinary skill in the art to modify the invention of Bachhuber *et. al.* by providing means for the determination that the electronic key is inside or outside of the motor vehicle (and correspondingly, if the user in possession of said electronic key is inside or outside of said motor vehicle).

One of ordinary skill in the art would have been motivated to make this modification because the Boolean variable, whether one is inside or outside of a motor vehicle, has much relevance to the states that certain motor vehicle systems, such as locking mechanisms and the engine ignition, should be in.



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Regarding Claim 8, Bachhuber *et. al.* in view of Memmola discloses every limitation of Claim 7, upon which Claim 8 depends. Additionally, Bachhuber *et. al.* discloses that the electronic key transmits an encoded signal that contains user-specific information (Column 4 Lines 25-28), and that the motor vehicle's engine control system is enabled if the user is positively identified Column (4 Lines 28-34).

Regarding Claim 9, Bachhuber *et. al.* in view of Memmola discloses every limitation of Claim 8, upon which Claim 9 depends. Additionally, Bachhuber *et. al.* teaches that the lock/unlock state of the doors of a keyless entry motor vehicle may be controlled by a portable wireless device (Column 1 Lines 32-63).

8. Claims 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bachhuber *et. al.* in view of Memmola, further in view of Röhrl, U.S. Patent No. 6,211,776.

Bachhuber *et. al.* in view of Memmola discloses every limitation of Claim 7, upon which Claims 10-11 depend, as outlined above.

Neither Bachhuber *et. al.* nor Memmola expressly discloses the practice of reducing transmission power of the stationary device or electronic key for the purpose of reducing the communication range.

Röhrl discloses a method by which an interrogation signal, transmitted from a motor vehicle antenna to a portable transponder, is reduced in power until said portable transponder just barely receives said interrogation signal (Abstract, Column 1 Lines 51-58).

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At the time that the invention was made, it would have been obvious to one of ordinary skill in the art to modify the invention of Bachhuber *et. al.* as modified by Memmola by providing by adding the practice by which the transmission power of the stationary device or electronic key is reduced so as to reduce communication range, including ranges restricted to the vehicle if the context is appropriate.

One of ordinary skill in the art would have been motivated to make this modification because it would make the theft of sensitive data, such as unlocking and ignition codes, much more difficult (*i.e.*, a potential thief with receiving equipment would have to be so close to the motor vehicle that said potential thief would risk being seen by the user).

### ***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew W. Genack whose telephone number is 571-272-7541. The examiner can normally be reached on FLEX.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fan Tsang can be reached on 571-272-7547. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

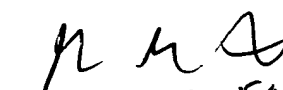
Matthew Genack

Examiner

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10 June 2005



RONALD G. FOSTER  
PRIMARY PATENT EXAMINER